

Amendments to the Specification:

Please amend paragraph [0014] on page 4 with the following amended paragraph:

FIG. 1 illustrates ~~[[an]]~~ a tape storage environment in which aspects of the invention are implemented. A host system 2 is in communication with a tape drive 4. The tape drive 4 may be a component within the host system 2 enclosure or a drive within a tape library or tape server that the host system 2 communicates with over a network (not shown). The tape drive 4 includes an encoder 6 to encode data received from the host 2 that is to be written on a tape medium 8 in a tape cartridge 10 engaged with the tape drive 4. The tape drive 4 further includes a decoder 12 to decode data stored on the tape medium 8 to return to the host system 2. A controller 14 within the tape drive 4 drives a read/write mechanism 16 to perform read and write operations with respect to encoded data on the tape medium 8 in a manner known in the art. The encoder 6 and decoder 12 may be implemented as separate hardware components external to the controller 14 or implemented within logic executed by the controller 14.

Please amend paragraph [0016] on pages 4-5 with the following amended paragraph:

FIG. 2 illustrates the data flow implemented in the encoder 6 to encode and store a block of uncoded binary user data in accordance with one implementation of the invention. Control begins at block 100 when the encoder 6 receives a block of binary user data for storage on the medium 100. Next, at block 102, the encoder ~~[[104]]~~ encodes the block of binary user data in preparation for storage on the tape medium 8. Specifically, the encoder ~~[[104]]~~ 6 encodes each word of the binary data block using an “m/n rate code block.” Under this coding scheme, which is shown in FIG. 3, “m” represents the number of bits in a “group” of uncoded binary user bits 310 to be encoded, and the “n” represents the number of bits in the corresponding “group” of encoded bits 320. Each group of “n” encoded bits 320 contains at least one binary pattern that enables improved reliability of gain and timing control operations, as discussed below in more detail. After the encoder 6 individually encodes groups of uncoded binary user data 310, the encoded data 320 is stored on the tape medium 8 at block 104. More particularly, the read/write mechanism 16 stores binary flux transitions corresponding to the encoded binary bit block to the recording medium 100. The storing of the data can be performed using known techniques in the art.